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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,374	01/14/2002	Stephen Nicholas Weiss	4110-183/165U1	1622
570	7590	01/23/2004	EXAMINER	
AKIN GUMP STRAUSS HAUSER & FELD L.L.P. ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103-7013			ENATSKY, AARON L	
			ART UNIT	PAPER NUMBER
			3713	

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,374

Applicant(s)

WEISS ET AL.

Examiner

Aaron L Enatsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Examiner acknowledges receipt of amendment on 11/03/03. The arguments set forth in the response are addressed herein below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,334,221 to Rosenhagen ("Rosen") in view of US Patent No. 6,151,318 to Woodward et al. ("Wood"). Rosen discloses a wireless remote control system for a toy vehicle (Fig. 1) using a Manchester packet-encoding scheme (6:1-24). The Manchester encoding uses biphasic encoded bits having a 50% duty cycle (6:1-24) where one binary state is defined by two transmit elements of a bit being the same and another binary state is defined by two transmit elements of a bit being opposite (Fig. 5). The packets are uniformly encoded as having a first predetermined number of flag bits, a second predetermined number data bits that will vary values depending on selected steering and speed, and at least one checksum bit (Fig. 4). Rosen does not however teach an uninterrupted stream of control packets. Wood teaches a certain packet structure delivery system using a continuous stream of packets to increase the speed of the data delivery (3:7-29). One would be motivated to modify Rosen to use an uninterrupted stream of packets for speedy data

delivery which would allow for lower data latency and full utilization of system bandwidth (3:7-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rosen with an uninterrupted packet stream taught by Wood to reduced latency and increased efficiency.

In re claim 3, a packet is made of a variable length flag bit followed by 14 bits, which teaches having a 16-bit packet (5:58-68).

In re claim 4, the flag bit can be variable, allowing for any number of flag bits, including six flag bits (5:58-68).

In re claim 9, flag bits are at the leading edge of a packet where checksum or parity bits are trailing a packet (Fig. 4).

In re claim 10, as the encoding scheme is bi-phase, the control signals are read in the middle of each transmit element (6:1-24).

In re claim 11, the decoder is a microprocessor (Fig. 9).

In re claims 2, 5-8, Rosen teaches the claimed limitations as discussed above, but does not recite the exact arrangement of the packet structure claimed by Applicant. However, the packet size and structure, such as bit arrangement for communicating certain features or commands is considered an obvious matter of choice that is well within the capabilities of one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rosen to arrange the second number of bits as eight, allocating three bits for drive function and three bits for steering functions, allocating 2 bits for other functions, and allocating the lower two bits of a sum of all the ones data bits for a parity check.

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Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen in view of Wood as applied to claims 1-11 above, and further in view of The Art of Electronics (AE). Rosen teaches the claimed limitations as discussed above, but does not teach using a digital phase-locked loop (PLL). AE teaches applications of a PLL circuit, such as in wireless communication devices (Pg. 652-653). AF also provides motivation for one to include a PLL in a circuit, such as for pulse synchronization of signals from noisy sources and regeneration of clean signals (Pg. 641). As wireless communication is fraught with noise issues such as in a remote wireless communication link, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a PLL in the decoder of a receiving device taught by Rosen to insure proper signal transmission and decoding, which would further ensure a highly response remote vehicle control system by eliminating noise.

Response to Arguments

Applicant presents arguments against Examiner's use of Rosen in view of Wood to portray the instant invention. Applicant reasons that because Rosen involves time-sharing a single frequency, the plausibility of operating a toy vehicle on a continuous control stream of packets is nil. Examiner concedes that Applicant's characterization of Rosen is fairly accurate, however Examiner disagrees with the contention that the combination is improper and inoperable. Rosen does teach that there are quiescent periods in between signal transmissions, as noted by Applicant. Also, as noted by Applicant, is the necessity of the quiescent periods. The quiescent periods are used to minimize the amount of collision when using multiple transmitters. Applicant believes that Rosen is limited to use with a plurality of vehicles, which would make the quiescent periods necessary. However, there is no limitation in Rosen that governs that the

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communication system must be used with a plurality of vehicles, hence necessitating the quiescent period. In fact, Rosen teaches that a multiple variations can be used. As examples, Rosen proposes that as many as 40 functions can be controlled at a time. Furthermore, the functionality can be divided among devices like two functions for 20 devices or four functions for 10 devices (Rosen 5:41-56). As such, Rosen may well be used in a single vehicle format. Hence, Examiner's combination of Rosen in view of Wood would be operable, without the quiescent period for the desirable reasons indicated by Woods. Furthermore, Examiner wishes to point out that one of ordinary skill in the art at the time of the invention would recognize that, continuous uninterrupted packet streams would necessitate the use of variable frequencies to avoid permanent signal interference (See US Pat. No. 6,661,351 to Matsushiro).

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 6,656,012 to DeAngelis et al. teaches continuous, uninterrupted packet transmission to remotely controlled vehicles to reduce latency.

US Pat. No. 6,661,351 to Matsushiro teaches standard RC cars usually only allow one car per frequency band.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron L Enatsky whose telephone number is 703-305-3525. The examiner can normally be reached on 8-6 M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on 703-308-1327. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Aaron Enatsky
1/15/04



**MICHAEL O'NEILL
PRIMARY EXAMINER**